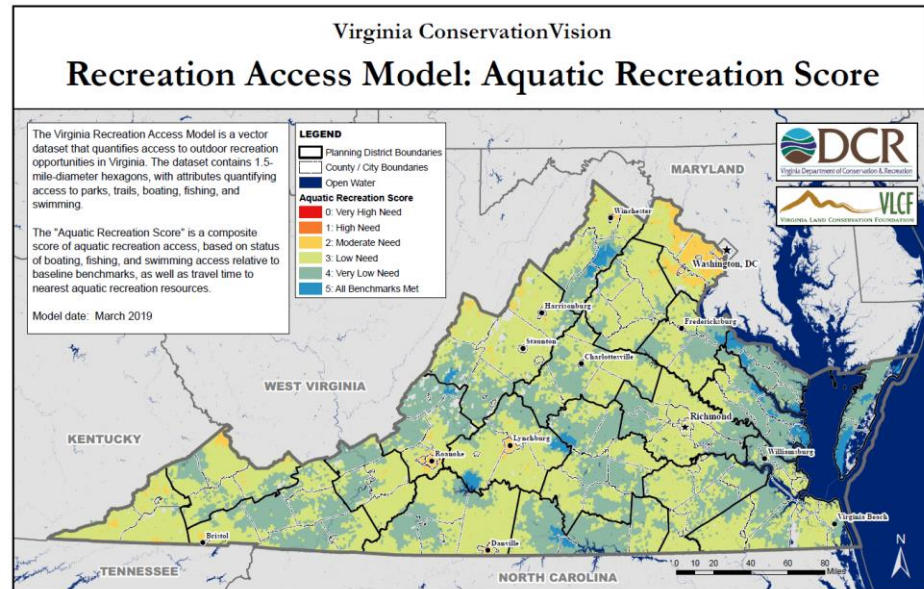
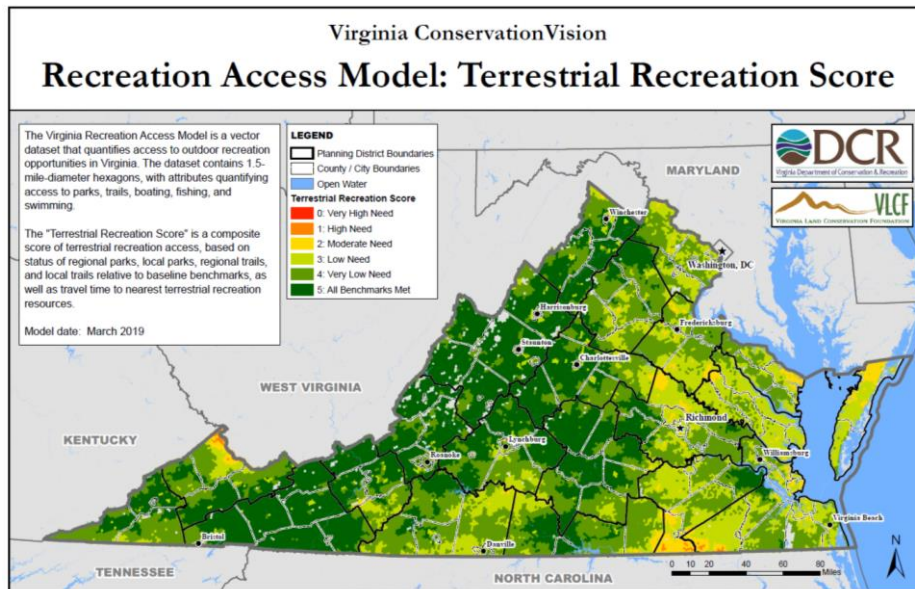


Virginia ConservationVision Recreation Access Model

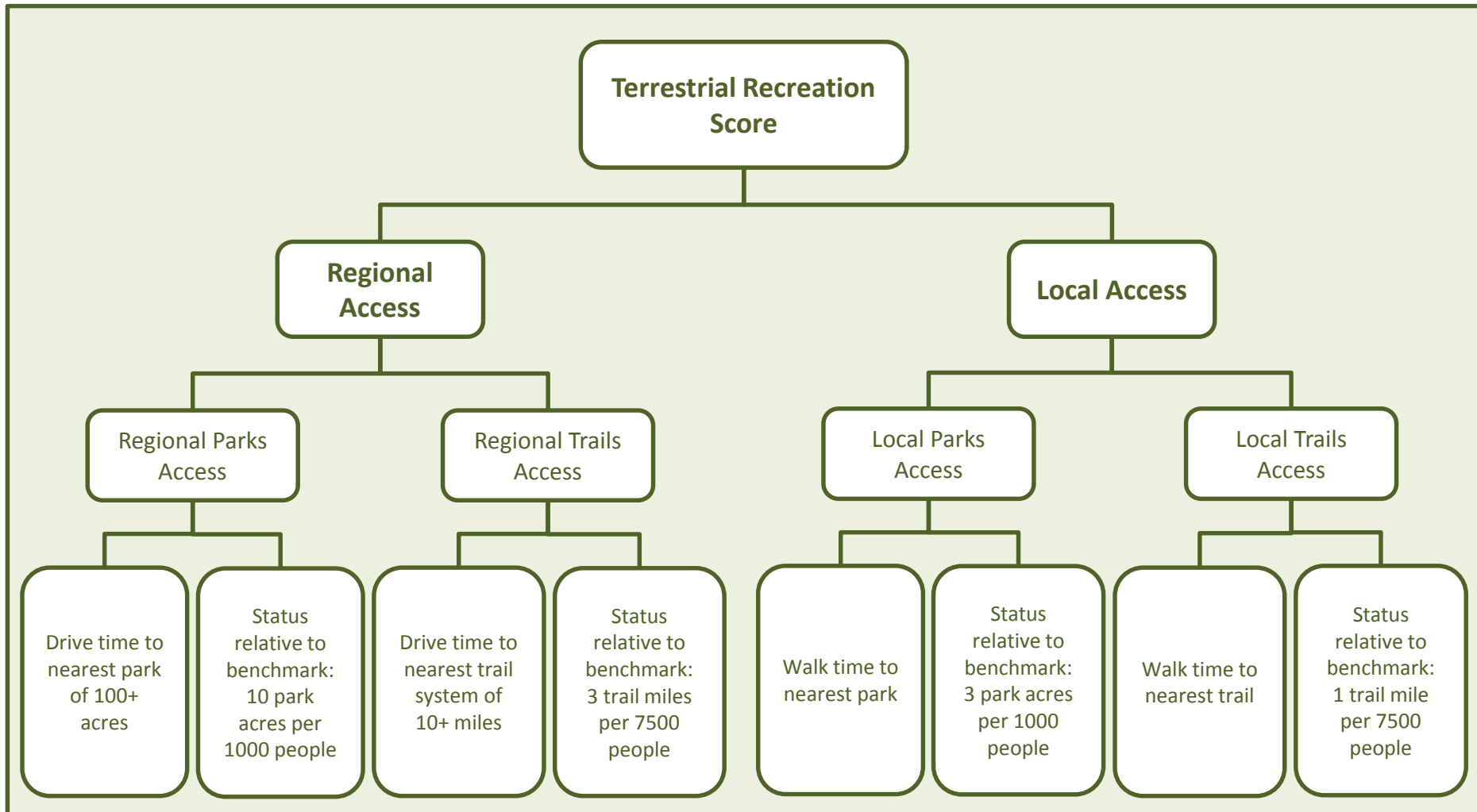
Purpose:

To quantify access to outdoor recreation opportunities in Virginia,
and identify areas where more recreational access is needed



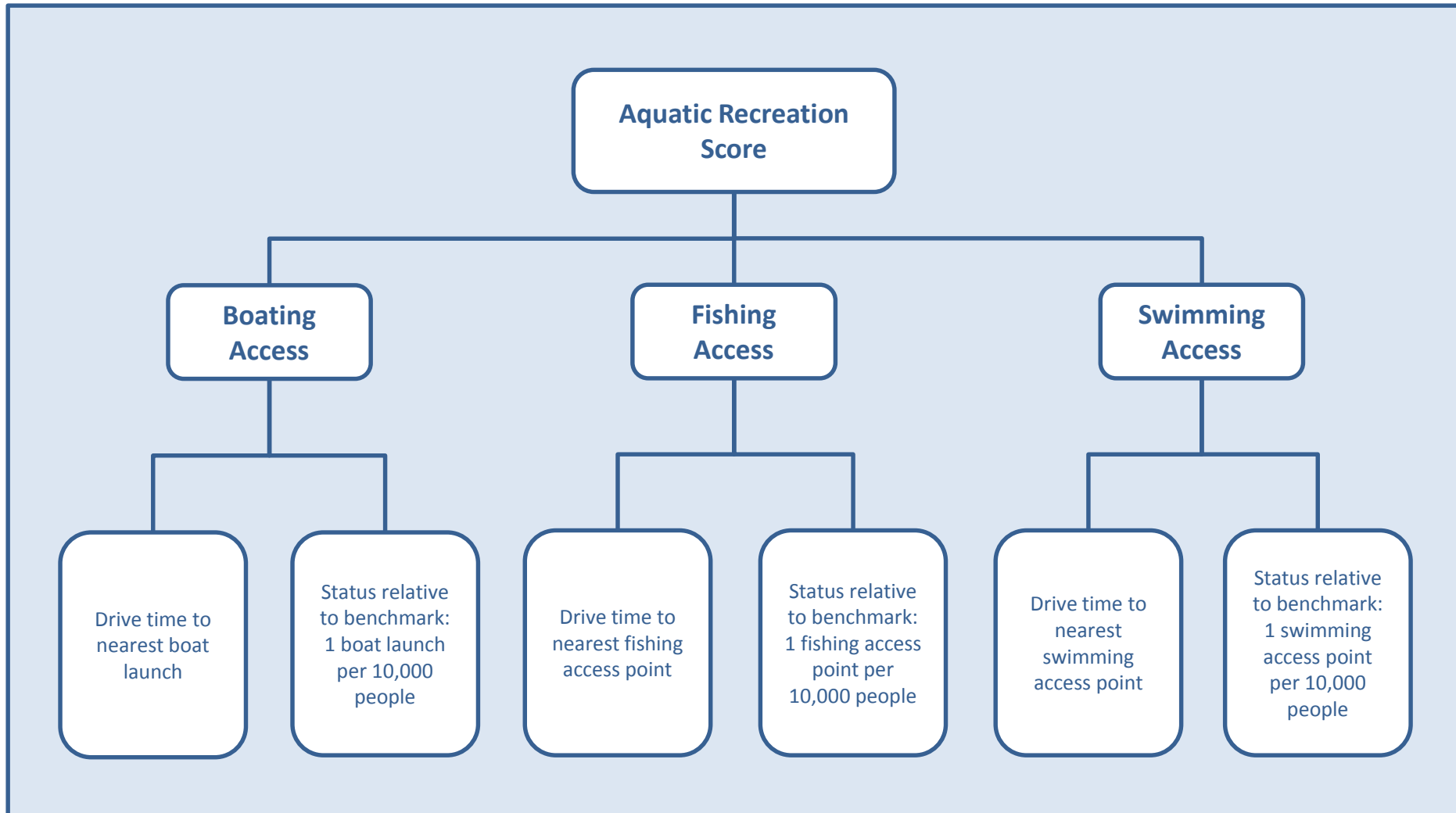
OVERVIEW OF THE RECREATION ACCESS MODEL:

Terrestrial Recreation



Note: The term “park” is used loosely to refer to any contiguous block of land with recreation access.

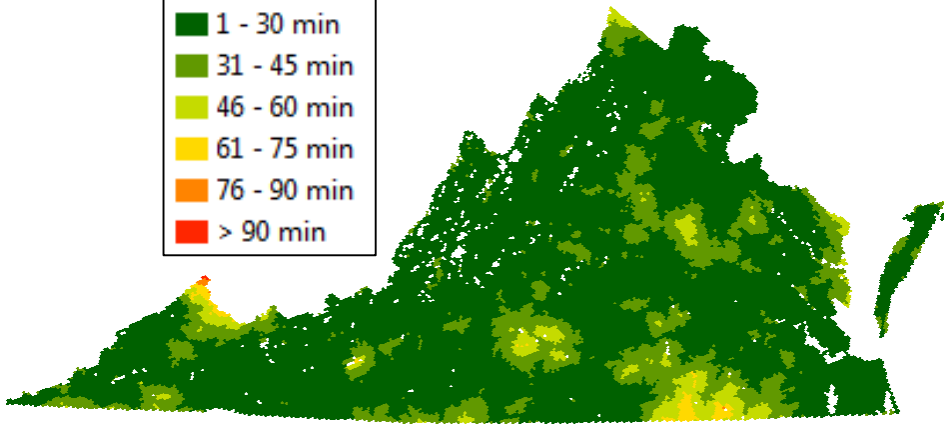
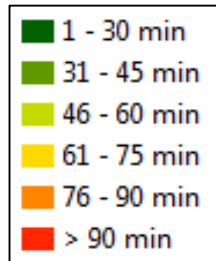
OVERVIEW OF THE RECREATION ACCESS MODEL: Aquatic Recreation



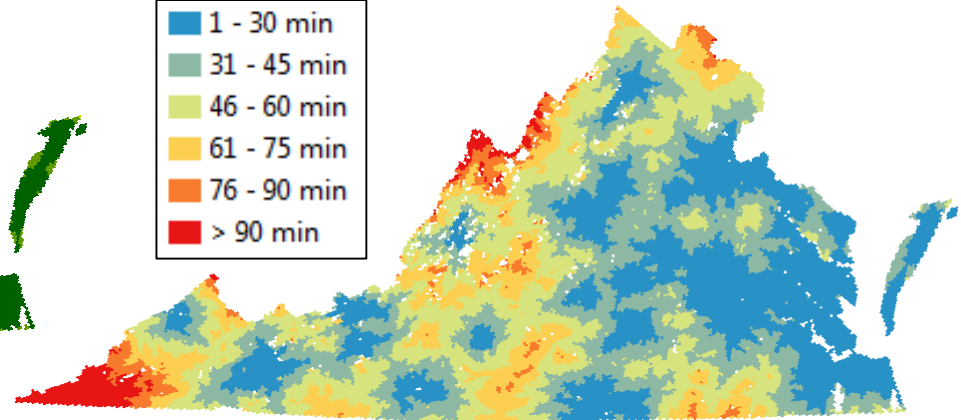
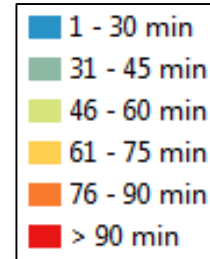
Note: "Swimming" refers to non-pool, beach or bank swimming.

Travel Time as a Measure of Recreation Access

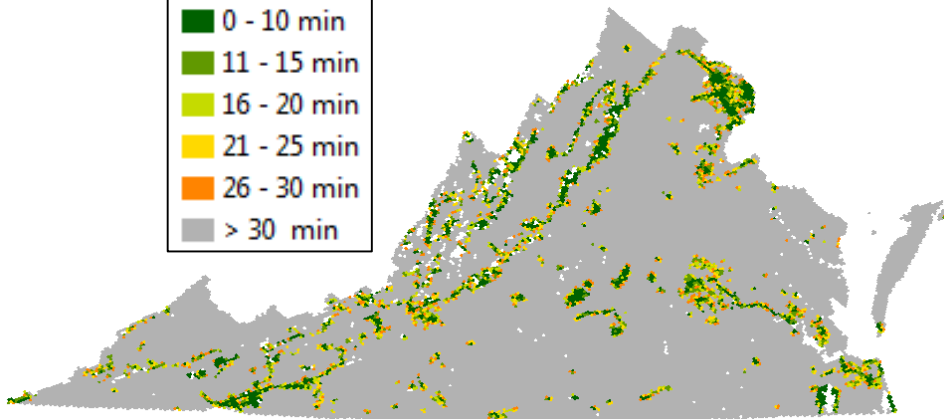
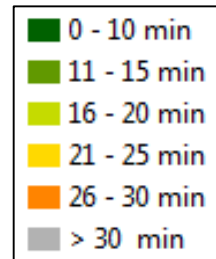
Avg. Drive Time to Nearest 100+ Acre Park



Avg. Drive Time to Nearest Swimming



Avg. Walk Time to Nearest Trail



Score	Drive Time	Walk Time
0	> 90 min	> 30 min
1	76 – 90 min	26 – 30 min
2	61 – 75 min	21 – 25 min
3	46 – 60 min	16 – 20 min
4	31 – 45 min	11 – 15 min
5	Up to 30 min	Up to 10 min

NRPA Areas and Facilities Standards (annotated)

by National Recreation and Park Association Standards (facilities must be readily available to the public)

Activity	Standard(population)			
Baseball (adult & HS)	1 field/10,000			
Baseball (youth)	1 field/6,000			
Basketball (outdoor)	1 court/2,000			
Basketball (indoor)	1 court/5000			
Football Field	1 field/10,000			
Golf Course	1 course/25,000			
Handball court	1 court/5,000			
Horseshoe court	1 court/2,000			
Multi-use court	1 court/2,000			
Outdoor Tennis Courts (adult)	1 court/2,000			
Outdoor Tennis Courts (youth)	1 court/1,000			
Picnic Ball Fields (youth)	1 field/5,000			
Swimming Pool (25m)	1 pool/10,000			
Swimming Pool (50m)	1 pool/20,000			
Tennis Courts	1 court/2,000			
Trail, Bicycle	1 mile/2000			
Trail, Equestrian	1 mile/6,250			
Trail, Exercise	1 mile/7,500			
Trail, Hiking	1 mile/4,000			
Trail, Jogging	1 mile/2,000			
Trail, Nature	1 mile/2,500			
Volleyball Courts	1 court/2,000			
Wading Pool				

Benchmarks for Adequacy of Recreation Access

Figure 7.4 Park Area Standards

type	acres/1,000 People	urban/suburban service area
Neighborhood park	3	2 Miles
Playground	no minimum	2 Miles
Community park	3	1 Mile
District park	4	5-7 Miles
Regional park	based on local guidelines	25 Miles
State park	10	1 Hour

Source: 2007 Virginia Outdoors Plan Appendix C, page 671

Benchmarks for Adequacy of Recreation Access

To assess recreation resources relative to benchmarks, we need to know the **quantity** of park acres, trail miles, or water access points **per person**, within **service areas** or **focal neighborhoods**.

Analysis Category	Baseline Benchmark	Type of Analysis
Regional Parks	10 acres per 1000 people	Regional: variable service areas
Local Parks	3 acres per 1000 people	Local: 1.5-mile radius focal neighborhoods
Regional Trails	3 miles per 7500 people	Regional: variable service areas
Local Trails	1 mile per 7500 people	Local: 1.5-mile radius focal neighborhoods
Boating	1 boat launch per 10,000 people	Regional: fixed service areas
Fishing	1 fishing access point per 10,000 people	Regional: fixed service areas
Swimming	1 swimming access point per 10,000 people	Regional: fixed service areas

Assessing Status Relative to Benchmarks:

Use of Service Areas

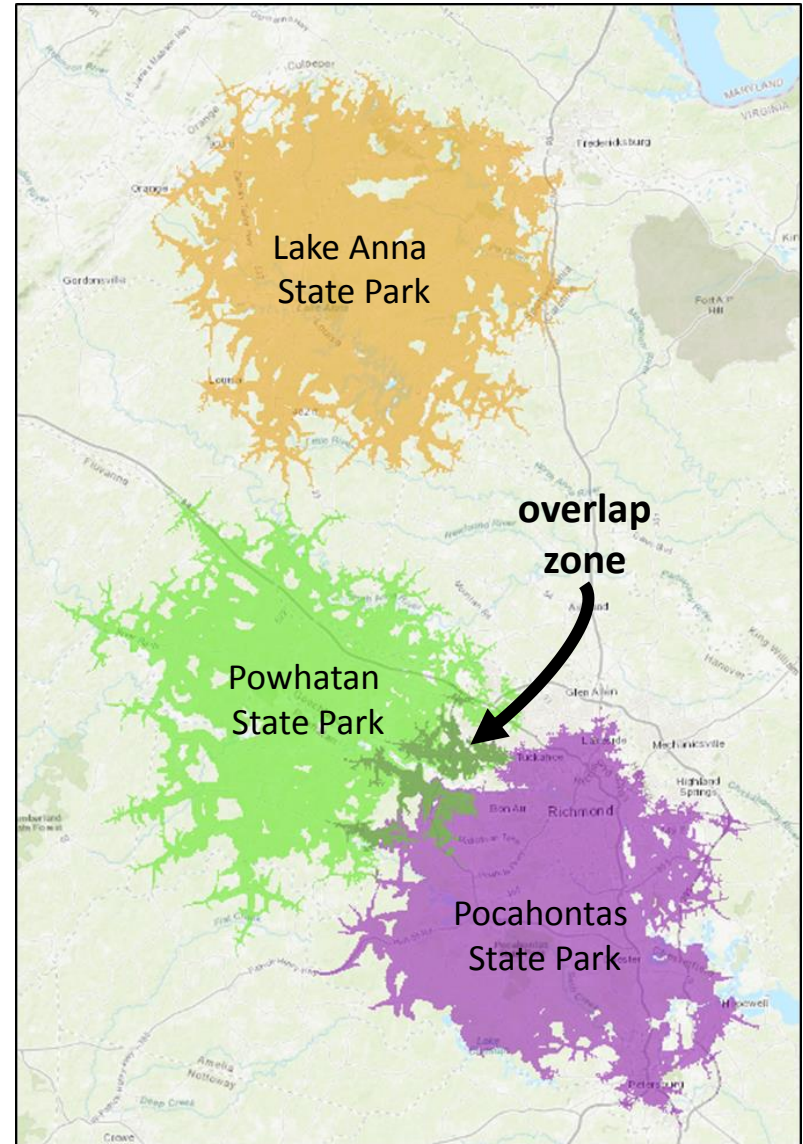
The **service area** for a park, trail system, or water access point is the area that can be reached from that facility **within a specified travel time** (which is arbitrary).

Within each service area, we calculate:

- **Number of people:** How many people are in the service area of each park, trail system, or water access point?
- **Quantity of resources:** How many acres are in each park, or how many trail miles are in each trail system? (Quantity is simply 1 for each aquatic recreation resource.)
- **Ratio of resource quantity to number of people**

Example:

30-minute service areas delineated for three state parks. Note that some people live in an area served by two parks (overlap zone).

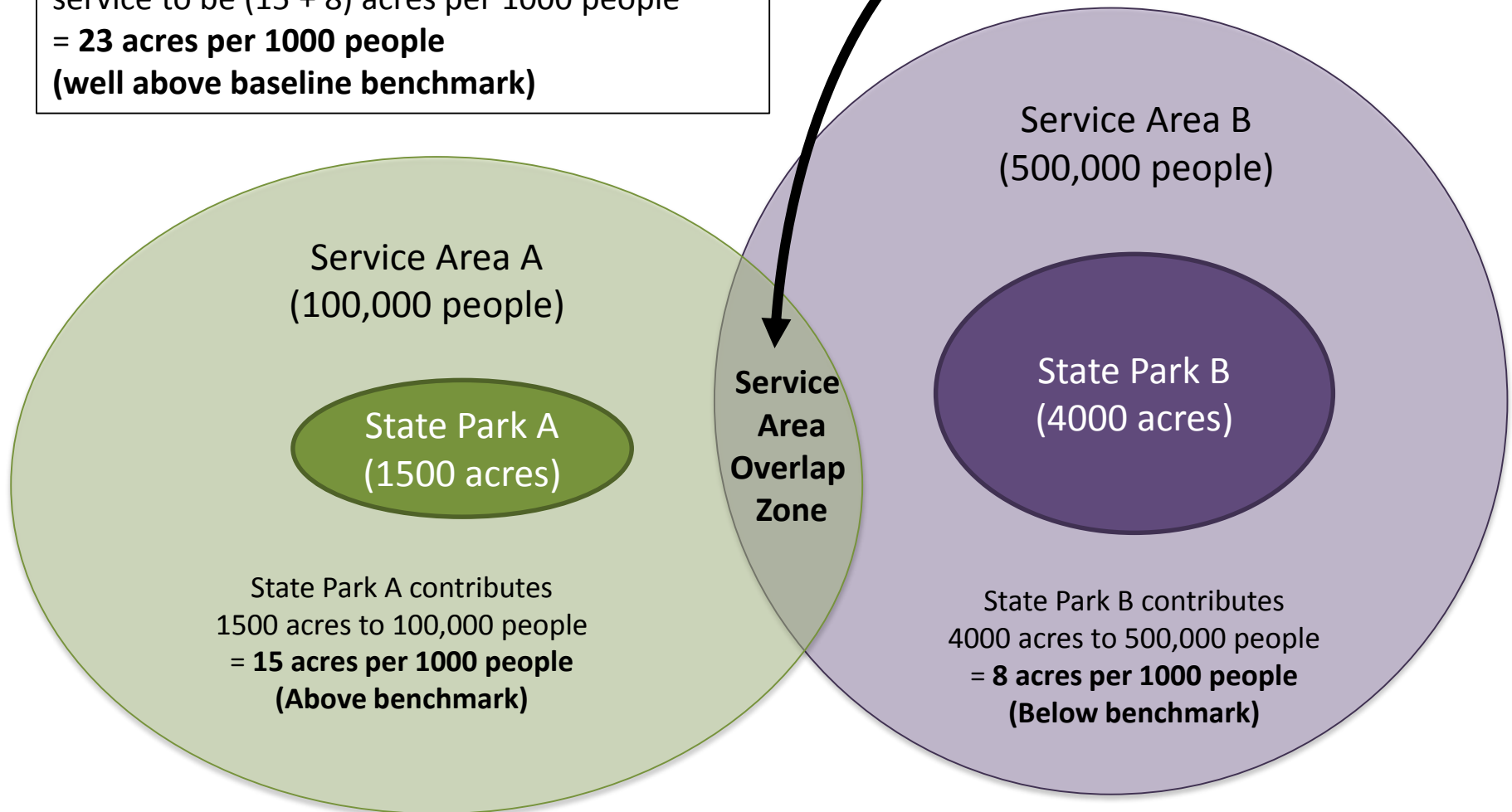


Simplified Example of Service Areas

Two parks with overlapping service areas

In the overlap zone, we calculate the level of service to be $(15 + 8)$ acres per 1000 people
= 23 acres per 1000 people
(well above baseline benchmark)

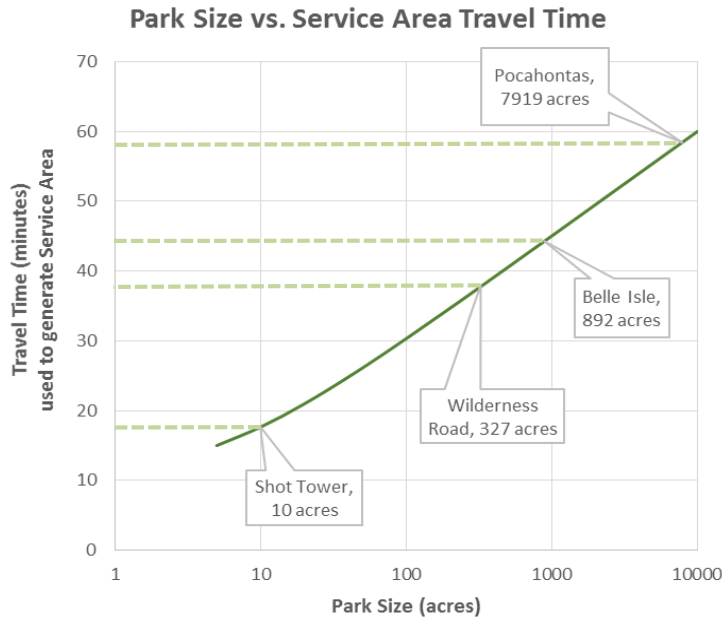
People in the “overlap zone”
are served by both parks



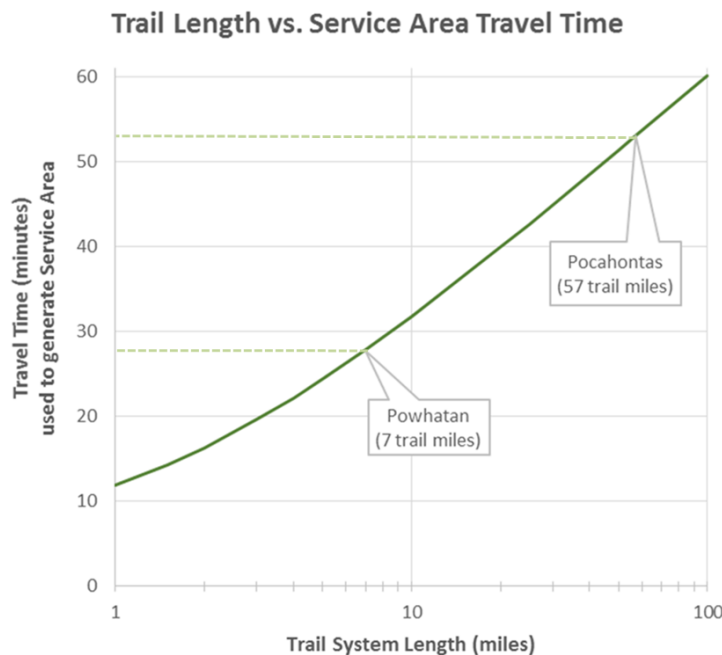
Delineation of Service Areas

The delineation of service areas is critical for evaluating status relative to benchmarks, for all regional analyses

- For boating, fishing, and swimming access points: **fixed 30-minute travel time** used to delineate all service areas
- For regional parks and trails: **variable travel times** used to delineate service areas based on park size or trail system length (logarithmic functions)



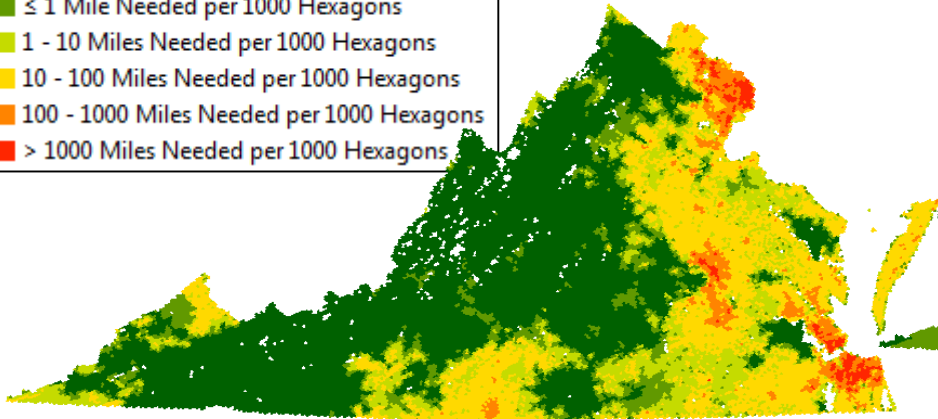
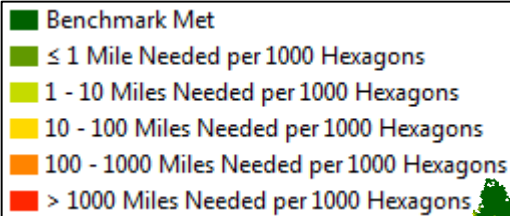
Park Acres	Travel Time
< 5	n/a
5	15 min
10	18 min
100	30 min
600	42 min
1000	45 min
10,000 +	60 min



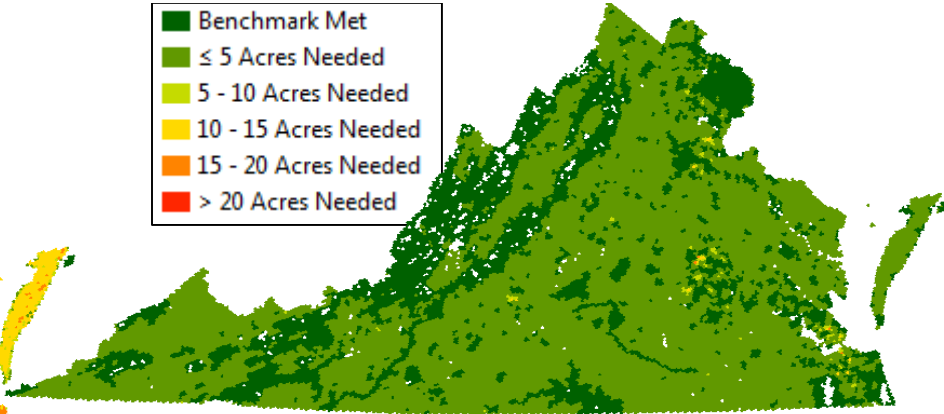
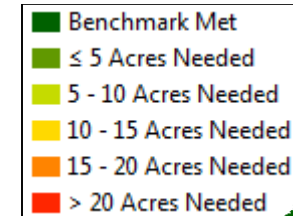
Trail Miles	Travel Time
< 1	n/a
1	12 min
5	24 min
10	32 min
25	43 min
50	51 min
100+	60 min

Benchmark Status as a Measure of Recreation Access

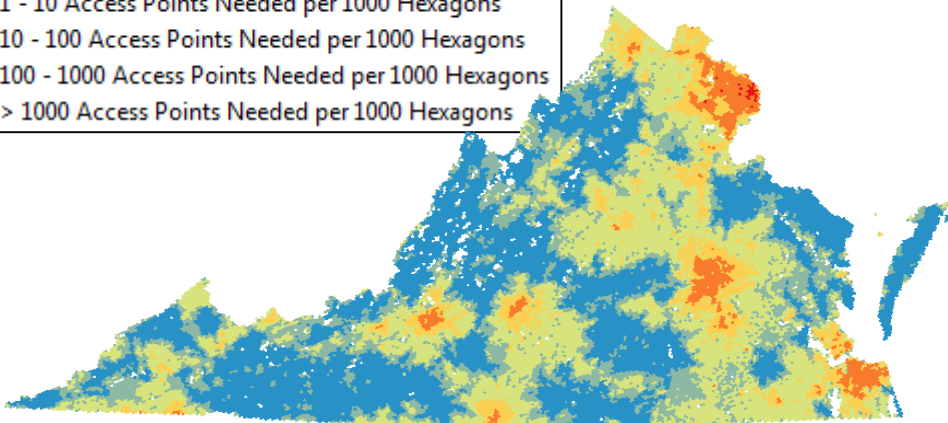
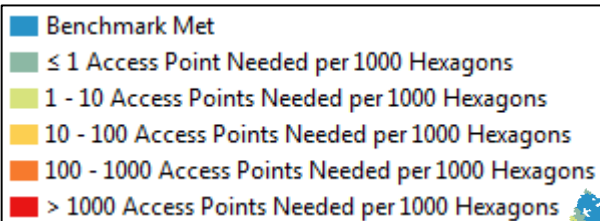
Benchmark Status of Regional Trails



Benchmark Status of Local Parks



Benchmark Status of Fishing



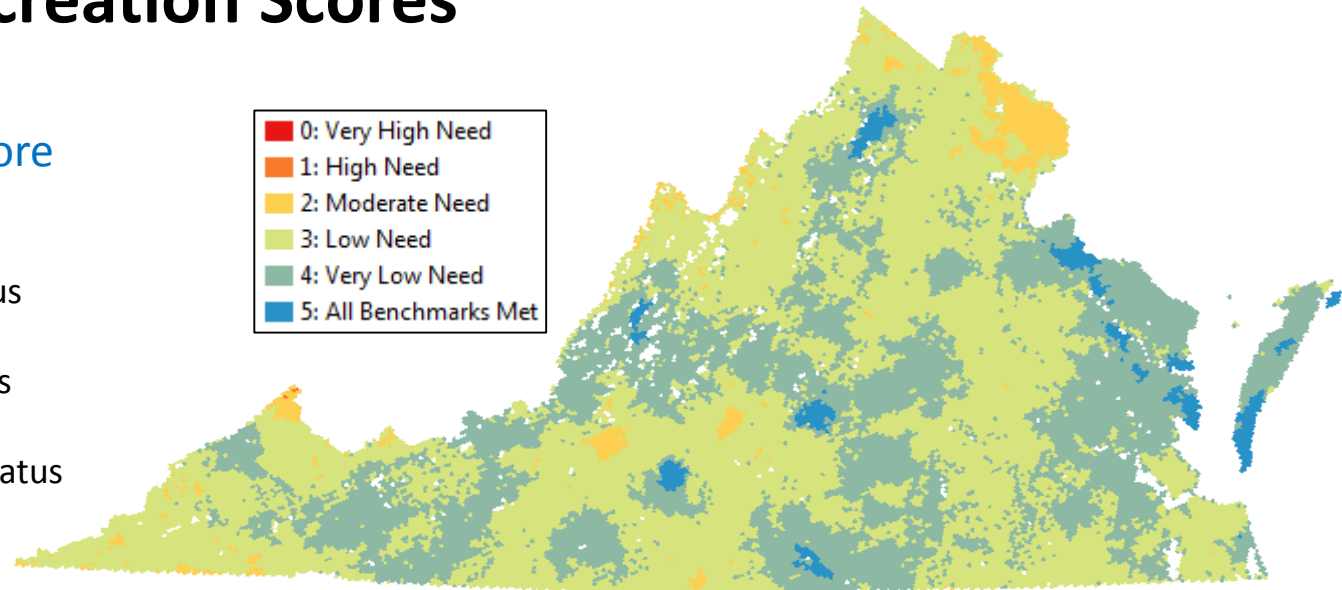
Score	Regional Status: Acres/Miles/Access Points Needed per 1000 Hexagons	Local Status: Acres or Miles Needed
0	> 1000	> 20 acres or 4 miles
1	100 - 1000	15 - 20 acres or 3 - 4 miles
2	10 - 100	10 - 15 acres or 2 - 3 miles
3	1 - 10	5 - 10 acres or 1 - 2 miles
4	≤ 1	≤ 5 acres or 1 mile
5	Benchmark Met	Benchmark Met

Composite Recreation Scores

Aquatic Recreation Score

Average of scores from:

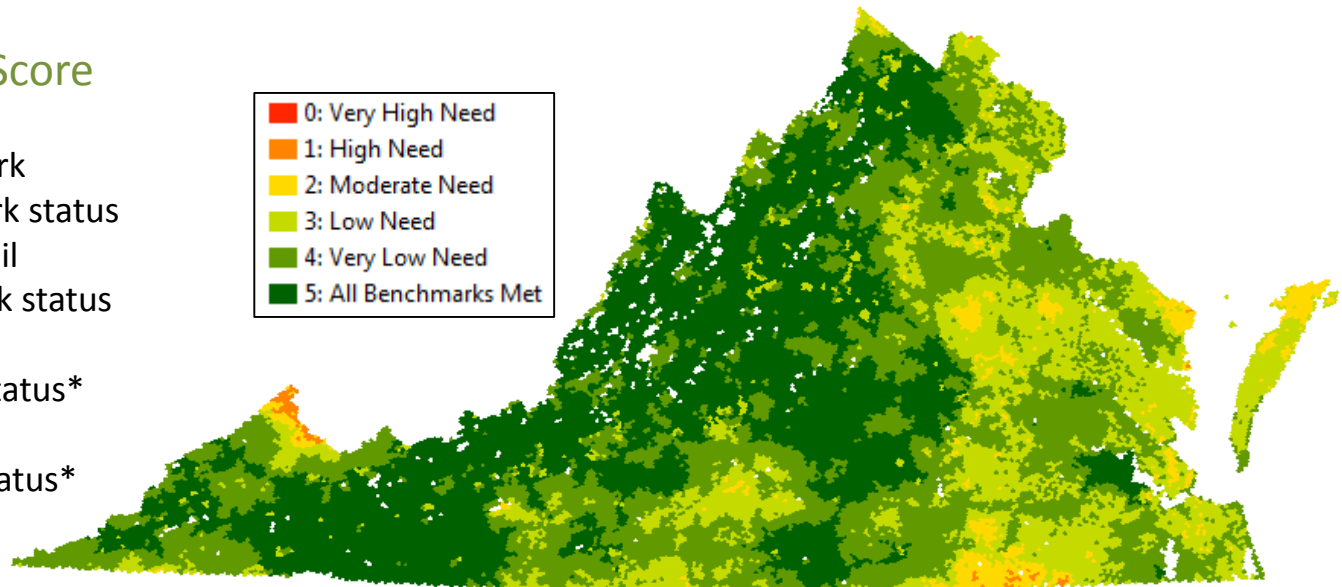
- Drive time to boating
- Boating benchmark status
- Drive time to fishing
- Fishing benchmark status
- Drive time to swimming
- Swimming benchmark status



Terrestrial Recreation Score

Average of scores from:

- Drive time to regional park
- Regional parks benchmark status
- Drive time to regional trail
- Regional trails benchmark status
- Walk time to local park*
- Local parks benchmark status*
- Walk time to local trail*
- Local trails benchmark status*



* Local components only included where population in hexagon is at least 500

Online Mapping

